PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

Meeting of January 6, 1948

The annual meeting of the New York Entomological Society was held January 6, 1948 in the American Museum of Natural History. President Doctor Hagan called the meeting to order at 8 P.M.

Mr. Comstock reported as the delegate to the New York Academy of Sciences. He said that the Academy is anxious to obtain new quarters and that a drive for $3,000,000 for this purpose has been initiated. He reported there had been no other action by the Academy during the year that would affect the Society.

The secretary read a letter of thanks to the membership from the Brooklyn Entomological Society in response to the letter from this Society on the occasion of their 75th anniversary.

A second letter was read concerning the increase of 20 per cent in the cost of printing the Journal.

The nominating committee submitted the following slate of officers for 1948.

President	Dr. Harold R. Hagen
Vice President	Dr. Mont A. Cazier
Secretary	Mr. Frank A. Soraci
Assistant Secretary	Mrs. Patricia Vaurie
Treasurer	Dr. James C. King
Assistant Treasurer	Mr. Leonard H. Sandford
Editor	Mr. Harry B. Weiss
Trustees	Dr. James C. King
	Dr. Mont A. Cazier
	Dr. H. T. Spieth
	Dr. Harold R. Hagan
	Mr. E .W. Teale
Publication Committee	Mr. Harry B. Weiss
	Dr. Charles D. Michener
	Mr. John D. Sherman, Jr.
Delegate to the N. Y. Academy of Sciences	Mr. William P. Comstock

The entire slate was duly elected.

There being no further business, Dr. Hagan, the speaker of the evening, presented his paper on "Viviparity in Insects." The following four types of viviparity were described and discussed: 1, Ovoviviparity 2, Adenotrophic viviparity 3, Metagonadic viviparity 4, Pseudoplacental viviparity. His paper was published in the Journal, vol. LVI, p. 63.

Frank A. Soraci, *Secretary.*

MEETING OF JANUARY 20, 1948

A regular meeting of the New York Entomological Society was held January 20, 1948 in the American Museum of Natural History; President Dr. Hagan in the chair. There were 10 members and 9 visitors present.

Dr. Lucy Clausen reported for the field committee that one field trip was held during 1947.

The treasurer, Dr. King, gave his annual report.

The program and field committees were then appointed by the president, as follows:

Program Committee	Field Committee
Dr. James Forbes	E. W. Teale
Albro T. Gaul	Chris E. Olsen
Dr. Lucy W. Clausen	Dr. Lucy W. Clausen

Dr. Albert Hartzell then proceeded with the paper of the evening, titled, "DDT, Its Proper Use as an Insecticide."

He traced the history of this insecticide from the time it was first synthesized in 1874, by Othmar Zeidler, a young chemistry student at Strasbourg, Germany, to its appearance as a miracle drug during the recent war. The insecticide reached this country through the Geigy Company which offered it to the U. S. Army after rediscovering and proving it in Switzerland in 1938 and later. The remarkable insecticidal properties of the material were proved by the U. S. Department of Agriculture and army authorities here, and its effectiveness against lice was, in large part, responsible for the abatement of the typhus epidemic of late 1943 and early 1944 in Italy. Since then it has been used successfully in combating the insect vectors of cholera, malaria, and other diseases in many parts of the world.

Dr. Hartzell spoke of the pharmacology of DDT, and of the precautions which need to be taken in using this insecticide. He stated that cold blooded animals are more susceptible than warm blooded animals to its effects.

Mention was made of the use for DDT in the garden and on ornamental material. Some plants are injured by direct applications of DDT, while others do not fare well in soil which has been heavily dosed. Far from being a cure-all, DDT has proven valueless against some insects.

FRANK A. SORACI, *Secretary.*

MEETING OF FEBRUARY 3, 1948

A regular meeting of the New York Entomological Society was held February 3, 1948, in the American Museum of Natural History; President Dr. Hagan in the chair. There were 17 members and 13 visitors present.

Mr. Leon Siroto of the Hoboken Inspection House, U. S. Bureau of Entomology and Plant Quarantine, was proposed for membership by Dr. Swain.

Dr. King, the treasurer, announced that there had been four resignations within the last few weeks and that one member, Mr. Alfred Fenton, of Texas had died.

There being no further business, the paper of the evening was given. Mr. Albro T. Gaul spoke on "Economy and Labor in the Vespine Society."

The observations of Mr. Gaul were made on a number of species of hornets, notably *Dolichovespula arenaria* and *Vespula maculifrons,* whose nests he had transferred indoors. He described in detail 8 categories of labor in the colonies, the production of eggs, foraging for food, brood nursing, nest construction, nest sanitation, the tending of tenerals, or not fully mature queens, defense of the colony, and water collecting. Excellent colored slides of a number of nests were shown.

Mr. Gaul's original observations and interesting topic provoked many questions and a long discussion followed.

Patricia Vaurie, *Assistant Secretary.*

Meeting of Feburary 17, 1948

The regular meeting of the New York Entomological Society was held Feb. 17, 1948 in the American Museum of Natural History, President Dr. Hagan in the chair. There were 12 members and 5 visitors present.

Mr. Leon Siroto of 40–71 Elbertson St., Elmhurst, L. I., N. Y. was elected to active membership.

Mr. Jack Colvard Jones of the Department of Entomology and Zoology of the Agricultural Experiment Station at Auburn, Alabama was proposed for membership.

The speaker of the evening Dr. Nellie Payne then gave her talk on "The Yearly Round of Insect Pests in a Suburban Garden."

On a garden plot of $60' \times 30'$, surrounded by brambles and sod, she studied horizontal and vertical migrations of insects. She found that a cold wet spring results in the influx of large numbers of cut worms, Japanese beetle grubs, Asiatic beetle grubs and native white grubs from the surrounding land through a $2'$ cleared strip around the garden, into the garden plot. In dry years migration across the strip into the garden does not take place.

With regard to vertical migration, Dr. Payne observed that in bare soil the greatest concentration of grubs occurs just below the frost line. Largest numbers occurred in the 2 foot strip, between the sod and the garden.

Population studies in the garden plot were made on a number of insects. Dr. Payne observed that the first annual appearance of some forms could be accurately forecast. Certain ground beetles, flea beetles, millipedes and sowbugs were given as examples of this. The following succession had been observed in her garden plot. The cabbage aphid was present and active on broccoli during the months of Dec., Jan. and Feb. From March 15 to the 26 millipedes and sowbugs appear. In April the flea beetles appear. In May and June, the various grubs were noticed. The adult Japanese beetles, and Asiatic beetles are abundant in July. Then in August and September an enormous increase in the population of various aphids occurs. Finally, in late Sept. the garden reverts back to the millipedes and sowbugs.

Various types of population build-up were then described. Examples given were:

(1) The cabbage aphid. There are 3 to 5 of these insects per broccoli head throughout the winter months. Then a slow increase with a spectacular build-up to 25,000 or so aphids per head during Sept. In October the population decreases just as spectacularly to its spring level.

(2) Other aphids such as the potato aphid are not as predictable. With this aphid a dry August means a build-up of the population. Otherwise the population might remain more or less constant.

(3) The Mexican bean beetle. This population starts out with 2–5 beetles per leaf on the first crop of beans. On the 2nd crop of beans, 5–10 beetles are common. The third crop is the vanished crop for the population has eaten itself out of food.

(4) The Japanese beetle. The downward trend in numbers during the past 5 years indicates a secular swing.

(5) A wooly bear. This insect seems to build up to 5 per bean plant; then stops. The population studies indicated that for this garden there were 3 general patterns. (1) the constant population, (2) the population with predictable fluctuations, (3) the population with unpredictable fluctuations.

There was considerable discussion of Dr. Payne's paper. The meeting adjourned at 9:45 P. M.

FRANK A. SORACI, *Secretary.*

MEETING OF MARCH 2, 1948

A regular meeting of the New York Entomological Society was held March 2, 1948, in the American Museum of Natural History. President Dr. Hagan called the meeting to order at 8:00 P. M. There were 11 members and 17 guests present. Mr. Pallister introduced to the SOCIETY Miss John lecturer in Zoology of Andra Christian College of India. Miss John spoke briefly of her connection with that Lutheran institution and of the fine progress which is being made in India along educational lines. She expressed her gratitude for the fine spirit with which she has been received in her tour of the various institutions in this country.

Mr. Jack Colvard Jones of the Alabama Agricultural Experiment Station was elected to active membership.

There were three proposals for membership, as follows:

Barnard D. Burks, associate taxonomist, Illinois Natural History Survey.

A. C. Miller, Pittsburgh, Pa.

John P. Barrett, Armour and Company in Chicago.

A committee of Mr. William P. Comstock and John C. Pallister was appointed to draw up a formal resolution appointing C. F. dos Passos to serve as the representative of this Society at the 13th International Congress of Zoology in Paris and the 8th International Congress of Entomology in Sweden, both to be held during the coming summer.

There being no further business, Dr. Brayton Eddy, curator of insects at the Bronx Zoological Gardens presented the paper of the evening titled "In-

sects Alive.'' He spoke of the dependency of man upon insects for the food he eats; of the estimate that only 1/2 of 1 percent of insects are injurious to man, and that many insects are kept in check through the efforts of other insects, i. e., the predators, parasites and scavengers.

Motion pictures of some of the live insects exhibits which he maintained at a Rhode Island public park were shown. He also presented a group of excellent color slides of popular interest.

After a discussion of Dr. Eddy's talk the meeting was adjourned at 9:30.

Frank A. Soraci, *Secretary.*

Meeting of March 16, 1948

A regular meeting of the New York Entomological Society was held March 16, in the American Museum of Natural History. President Dr. Hagan called the meeting to order at 8:00 P. M. There were 16 members and 18 visitors present.

The following new members were elected:

A. C. Miller, P. O. Drawer 2038, Pittsburgh, Pa.

John P. Barrett, Armour & Co., Chemical Research & Development Department, Union Stock Yards, Chicago 9, Ill.

Barnard D. Burks, Assoc. Taxonomist, State Natural History Survey Division, Urbana, Ill.

The following were proposed for membership:

Prof. Osmond P. Breland, Assoc. Professor of Zoology, Department of Zoology, University of Texas, Austin 12, Texas.

Esmond B. Martin, 465 East 57th Street, New York 22, N. Y.

Mr. Chris Olsen offered the use of his home for the society field trip during May. The president thanked him for this kind offer and expressed the hope that many of the members might be able to partake of the Olsen hospitality on that occasion.

There being no further business, Mr. Roman Vishniac speaker of the evening proceeded with his talk on ''Photographing Insects.'' He spoke of the many mysteries of the insect world, and of the fact that interest in insects is growing. This growth is more than matched by the growth of the insecticide industry, but he feels it would be a most desolate world if the insecticides ever actually catch up with the insects. Of greatest interest to Mr. Vishniac was the development of the insect from the egg through the various stages, often unrecognizable one to the other, to the adult form.

In his photography, Mr. Vishniac has always made it his primary objective to picture the free insect. In captivity these animals do not perform naturally and, when dead, they are a poor substitute for the real thing.

Mr. Vishniac then showed an excellent collection of slides in color, and black and white, which were outstanding for their depiction of insect faces, and especially eyes. He also showed some fine colored moving pictures of insects in action.

Frank A. Soraci, *Secretary.*

MEETING OF APRIL 6, 1948

The regular meeting of the New York Entomological Society was held April 6 in the American Museum of Natural History. President Dr. Hagan called the meeting to order at 8:00 P. M. There were 12 members and 16 visitors present. The following men were elected to active membership, Prof. Osmond P. Breland, Department of Zoology, University of Texas, Austin, and Dr. Esmond B. Martin, 465 East 57th Street, New York.

The following were proposed for membership.

Prof. C. L. Fluke, Department of Entomology, University of Wisconsin, College of Agriculture, Madison 6, Wisconsin.

Dr. Norman S. Easton, 458 High Street, Fall River, Massachusetts.

Mr. Chris Olsen offered the use of his grounds at West Nyack, N. Y. for a SOCIETY field trip. His invitation was accepted for June 6.

Dr. Hagan welcomed Dr. Schneirla on his return from Panama. Dr. Schneirla promised to talk to the society on his experiences at an early date.

Prof. Virgil N. Argo presented the talk of the evening titled "Ramblings of a Biologist in Mexico." He related his many interesting experiences in traveling by automobile from Laredo south to Mexico City and Vera Cruz. His excellent photographs were of wide general interest.

FRANK A. SORACI, *Secretary.*

MEETING OF APRIL 20, 1948

A regular meeting of the New York Entomological Society was held April 20, 1948, at the American Museum of Natural History. President Dr. Hagan called the meeting to order at 8: 00 P. M. There were 18 members and 38 visitors present.

The following men were elected to active membership:

Prof. C. L. Fluke, Dept. of Entomology, University of Wisconsin, College of Agriculture, Madison, Wisconsin.

Dr. Norman S. Easton, 458 High Street, Fall River, Massachusetts.

The following was proposed for membership:

Dr. H. I. Wechsler, Dept. of Biology, Fordham University.

Mr. E. W. Teale offered the use of his grounds at Baldwin, L. I., for a SOCIETY outing during August. His kind offer was accepted and the Field Committee agreed to send proper announcements to the membership at a later date.

There being no further business, Mr. Leon Siroto presented his talk on "An Amateur Naturalist on the Amazon River." Mr. Siroto made this trip to satisfy his desire to see the jungle for himself. He also hoped to track down the so-called "bush dog" of the Amazon. His interest in insects was limited to the collection of the large, spectacular forms, primarily beetles. Equipped only with those things which could be carried he proceeded by boat to Belem, at the mouth of the Amazon river. He discarded his plan of hiking from there to Rio de Janeiro when he found his map was in error, in showing the presence of a road. Mr. Siroto finally settled for a trip up

the Amazon. He boated to Manaus in the state of Amazonas, and then up to Fonte Boa by small boat. The speaker mentioned his difficulty in obtaining food and his stay was not as long as he had planned for he found he was not well adapted to starving. He was impressed with the many birds, and in the Upper Amazon the birds of prey were especially abundant and interesting. He was able to collect some Buprestidæ and Cerambycidæ at Fonte Boa, but his mission, as it concerned the bush dog, was a failure. The trip from Fonte Boa back to Manaus was made by plane, and the return to this country by boat. Mr. Siroto hopes that he might be able to revisit the Amazon, avoiding the many pitfalls that beset the explorer on his first trip to the jungle.

Frank A. Soraci, *Secretary.*

Meeting of May 4, 1948

A regular meeting of the New York Entomological Society was held May 4, 1948 in the American Museum of Natural History. President Dr. Hagan called the meeting to order at 8:00 P.M. There was 20 members and 17 guests present.

Dr. Salvador de la Torre y Caldejas of Playa 75½ Matanzas, Cuba was proposed for membership.

Dr. Harry I. Wechsler, 85 Central Avenue, White Plains, New York was elected to active membership.

Miss Hoffman, daughter of Prof. Hoffman of Mexico City was introduced. She spoke of her interest in ticks and chiggers and was appreciative of the help extended her by various members of the museum staff.

Mr. John D. Sherman, Jr., read a note, prepared by Dr. Herbert Ruckes concerning the death on May 2, 1948 of Jose Rollin de la Torre Bueno at Tucson, Arizona. This note was spread on the minutes of the society and the secretary was directed to mail a copy to the family.

There being no further business, Mr. Jay T. Fox of Seaford, Long Island, proceeded with the paper of the evening titled "Entomological Photomacrography and Photomicrography."

He stressed the importance of photography in depicting man's activities, then spoke briefly on the history of black and white and color photography. The 3-color subtractive process of color photography was invented by Dr. Fisher in Germany in 1914, and almost exactly duplicated by two Russian musicians in 1921. The Eastman Kodak Company hired the musicians and in 1936 Kodachrome appeared on the market. There has been considerable improvement in color, so that slides in Mr. Fox's collection which were made some 8 years ago, show practically no fading at this time. Mr. Fox spoke of the need for accurate exposures in color work and of the need for proper adjustments for color temperature. In his work he corrects his exposures to a half stop. He then showed a series of insect pictures, most of which were taken from the collections of the American Museum of Natural History. His equipment was set up for this work in such manner that photographs of the specimens could be taken quickly and accurately.

NOTE ON TORRE-BUENO

Jose Rollin de la Torre-Bueno died at his home in Tucson, Arizona, on Sunday, May 2nd, 1948, at the age of 76. By his passing American Entomology has lost one of its outstanding personalities and leaders. A goodly part of his life, prior to retirement to Arizona, was spent as Assistant to the President of the General Chemical Company, but early in his career he found time to become interested in the biology of the Hemiptera. He soon established for himself an enviable reputation for his amateur standing in entomology and it was not long before the now familiar initials J-R-T-B. were universally recognized wherever Hemipterists gathered. Bueno's earlier studies centered on the aquatic hemiptera in which he became a specialist. Kirkaldy thought so highly of his work that he erected the genus *Buenoa* in honor of our late confrére.

Torre-Bueno's aristocratic heritage dating from the time of the Spanish Conquistadores marked him as one who had the courage of his convictions and who strove to be a perfectionist in all his undertakings. Not all entomologists were his friends, however, for he was a severe and bitter critic to all who stepped beyond the bounds of accepted procedure. His caustic editorials in the Brooklyn Bulletin and his sharp comments in other entomological journals are classics, and frequently were the cause for pause to reconsider the validity of one's own decision. He was, on the other hand, a helping friend and adviser to many. The greatest aim of his entomological career was to make available to all interested as much of the general knowledge of the systematics of Hemiptera as possible. Thus in his later life he undertook the herculean task of preparing and publishing his *Synopsis* of the families of Hemiptera of North America, a work that now is incomplete and interrupted by his death.

Torre-Bueno's indefatigable energy, his devotion to his entomological studies and his unselfish contribution of time and effort toward the editorial work of the Bulletin of the Brooklyn Entomological Society and Entomologica Americana, have marked him as a man to be admired and to whom we all owe a debt of gratitude. Another monumental contribution, his *Glossary*, is the accepted hand book of all workers in our science.

In recognition of his achievements and his faithful service to them, the members of the Brooklyn Entomological Society elected him Honorary President of their association.

Now that he has passed to his reward, we salute Torre-Bueno and say that whoever made his acquaintance was a better man for having known him.

HERBERT RUCKES
FRANK A. SORACI, *Secretary.*

MEETING OF MAY 18, 1948

A regular meeting of the New York Entomological Society was held May 18, 1948 in the American Museum of Natural History. President Doctor Hagan called the meeting to order at 8: 00 P. M. There were 15 members and 11 visitors present.

Mr. E. W. Teale gave notice of the field trip which would be held on his grounds on August 22.

Doctor Caldejas was elected to membership.

There being no further business, Mr. Herbert T. Schwarz, speaker of the evening, gave a talk on "The Stingless Bees of the Western Hemisphere."

Some of the information presented in his recently issued Stingless Bees (Meliponidæ) of the Western Hemisphere was covered by Mr. Schwarz. He

pointed out that these bees belong to the small minority among the Apoidea (perhaps only about 5 per cent) that are social in habit. Although they live in colonies, they have, however, retained the technique, characteristic of the solitary bees, of stocking a cell with provisions (the task of the workers), of laying an egg thereon (the task of the queen), and then of sealing the cell, with the result that the larva that emerges from the egg is shut off from contact with the world until it issues from the cell as a winged insect.

The speaker made some reference to the wide diversity—of size as well as structure—among the different species of stingless bees, which range from insects larger than the honeybee to creatures so tiny that they sometimes get caught in the human eye when visiting it to lap its moisture. He also spoke of the different components of the hive and pointed out that the stingless bee queen, like the honeybee queen, has undergone structural degeneration concomitant with her relinquishment of certain of the functions performed by the female in the case of the solitary bees.

Mr. Schwarz noted that stingless bees occur in the tropical parts of the Old World as well as the New but that their distribution is discontinuous, with a wide area unoccupied by them in the Pacific eastward of the Solomon Islands, their last known outpost, until the west coast of South America is reached. Stingless bees are known from all the states of South America with the possible exception of Chile, and from all the Central American states and Mexico, but they fail to reach even the southern limits of the United States (although they have recently been artifically introduced into Louisiana) and are absent from many of the West Indian islands.

Another phase of the subject was the nest and its structure, with emphasis not only on the architecture but also on the choice of nest sites, to the inclusion of arboreal as well as subterranean nests, as well as nests erected in the structures of other creatures, termites, ants, wasps, and even birds. While many of the nests are of the standard pattern, horizontal story built above horizontal story, other nests, more primitive in type, have the brood cells arranged in clusters. As many as 35 or 40 stories may occur in nests where this kind of architecture prevails. Honey and pollen are stored in jars irregularly clustered.

Due to limitations of time many phases of stingless bee biology had to be omitted but brief reference was made to the many enemies of stingless bees, including among the invertebrates especially bees, ants, wasps, cockroaches, and saltidid spiders and among the vertebrates, in addition to man, many mammals, birds, and reptiles. Against these enemies the bees have developed defenses, partly architectural (for a stingless bee nest is a citadel as well as a habitation) but largely individual. Acting in concert the individual bees of a colony are capable of effective defense. Deprived of a sting, they nevertheless resort to biting; some of them (*Oxytrigona*) discharge caustic fluids; a few species have been observed gluing up small intruders of the nest with a sticky substance, rendering them utterly impotent.

Frank A. Soraci, *Secretary.*